CLAIMS

What is claimed is:

1. A method for determining a position of a mobile terminal tuned to a first control channel, comprising:

transmitting a paging request to the mobile terminal via the first control channel;

switching from the first control channel to a second control channel;

transmitting a paging response via the second control channel; and

determining the position of the mobile terminal based on the paging response.

2. The method of claim 1 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

3. The method of claim 2 wherein the first control channel is an Enhanced General Packet Radio Service 136 (EGPRS-136) control channel and the second control channel is a digital control channel.

4. The method of claim 1 further comprising:

transmitting, in response to the paging response, a release message via the second control channel;

receiving the release message; and

switching from the second control channel to the first control channel in response to the release message.

5. The method of claim 1 wherein the paging request is one of a hard page and a layer 3 page comprising a teleservice indication or Wide Open R-Data Transport indication.

6. The method of claim 1 wherein the determining the position of the mobile terminal based on the paging response comprises:

determining a cell in which the mobile terminal is positioned.

7. A system for determining a position of a mobile terminal tuned to a first control channel in a wireless communication network, comprising:

a memory that stores instructions; and

a processor that executes the instructions to send a paging request to the mobile terminal via the first control channel, the paging request indicating that the mobile terminal is to switch to a second control channel, receive a paging response from the mobile terminal via the second control channel, and determine the position of the mobile terminal based on the paging response.

8. The system of claim 7 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

9. The system of claim 7 wherein the paging request is one of a hard page and a layer 3 page indicting a circuit-switched service.

10. The system of claim 7 wherein, after receiving a paging response from the mobile terminal via the second control channel, the processor sends a release message to the mobile terminal, the release message indicating that the mobile terminal may switch back to the first control channel.

11. The system of claim 7 wherein, when determining the position of the mobile terminal based on the paging response, the processor determines a cell sector in which the mobile terminal is located.

12. A computer-readable medium containing instructions for controlling at least one processor to perform a method for determining a position of a mobile terminal tuned to a first control channel, the method comprising:

sending a paging request to the mobile terminal via the first control channel, the paging request indicating that the mobile terminal is to switch to a second control channel;

receiving a paging response from the mobile terminal via the second control channel; and

determining the position of the mobile terminal based on the paging response.

13. The computer-readable medium of claim 12 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

14. The computer-readable medium of claim 12 wherein the paging request is one of a hard page and a layer 3 page comprising a teleservice indication or Wide Open R-Data Transport indication.

15. The computer-readable medium of claim 12 wherein the method further comprises:

sending, after receiving a paging response from the mobile terminal via the second control channel, a release message to the mobile terminal, the release message indicating that the mobile terminal may switch back to the first control channel.

16. A method for determining a position of a mobile terminal tuned to a first control channel, comprising:

transmitting a paging request to the mobile terminal via the first control channel;

switching from the first control channel to a second control channel;

receiving a paging response via the second control channel from the mobile terminal;

transmitting a position request to the mobile terminal;

receiving a position response from the mobile terminal; and

determining the position of the mobile terminal based on the position response.

17. The method of claim 16 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

18. The method of claim 16 wherein the paging request is a layer 3 page comprising a teleservice indication or a Wide Open R-Data Transport indication.

19. The method of claim 16 further comprising:

assigning, in response to receiving the paging response, one of a control channel and a traffic channel, and

wherein the transmitting a position request to the mobile terminal occurs via the assigned channel.

20. The method of claim 16 further comprising:

transmitting a release message after receiving the position response.

21. The method of claim 16 wherein the determining the position of the mobile terminal based on the position response comprises:

determining a cell sector in which the mobile terminal is located.

22. A system for determining a position of a mobile terminal tuned to a first control channel in a wireless communication network, comprising:

a memory that stores instructions; and

a processor that executes the instructions to send a paging request to the mobile terminal via the first control channel, the paging request indicating that the mobile terminal is to switch to a second control channel, receive a paging response from the mobile terminal via the second control channel, transmit a position request to the mobile terminal, receive a position response, and determine the position of the mobile terminal based on the position response.

23. The system of claim 22 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

24. The system of claim 22 wherein the paging request is a layer 3 page indicating a circuit-switched service.

25. The system of claim 22 wherein, in response to receiving the paging response, the processor assigns one of a control channel and a traffic channel, and

wherein, when transmitting a position request to the mobile terminal, the processor transmits the position response via the assigned channel.

26. The system of claim 22 wherein, when determining the position of the mobile terminal based on the position response, the processor determines a cell in which the mobile terminal is located.

27. A computer-readable medium containing instructions for controlling at least one processor to perform a method for determining a position of a mobile terminal tuned to a first control channel, the method comprising:

transmitting a paging request to the mobile terminal via the first control channel;

receiving a response to the paging request via a second control channel;

transmitting a position request to the mobile terminal;

receiving a position response; and

determining the position of the mobile terminal based on the position response.

28. The computer-readable medium of claim 27 wherein the first control channel is a packet control channel and the second control channel is a circuit-switched control channel.

29. The computer-readable medium of claim 27 wherein the paging request is a layer 3 page comprising a teleservice indication or Wide Open R-Data Transport indication.

30. The computer-readable medium of claim 27 wherein the method further comprises:

assigning, in response to receiving the paging response, one of a control channel and a traffic channel, and

wherein the transmitting a position request to the mobile terminal occurs via the assigned channel.

31. The computer-readable medium of claim 27 wherein the determining the position of the mobile terminal based on the position response comprises:

determining a cell sector in which the mobile terminal is located.

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